REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claims 50-53, 55, 58 and 59 to overcome the § 112 rejections, and to further clarify the subject matter of the present invention. Support for the amendment to claim 50 may be found, for example, on page 31, lines 20-21 of the specification. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art.

II. The Rejection Of Claim 10 Under 35 U.S.C. § 112

Claim 51 was rejected under 35 U.S.C. § 112, second paragraph, as lacking proper antecedent basis for the term "said carrying means". Claim 51 has been amended to read "a carrying means" in order to overcome this rejection. The Examiner further alleges that the "carrying means" refers to the "feeding device" of claim 50. We note that page 34, line 3 recites, "resonance control plates 21 also serving as carrying plates..." Thus, the carrying means is one resonance control plate pair, whereas the feeding device is either of the upper and lower conveyor belts comprising multiple plates. Thus, as the specification defines "carrying means", and the claim language is consistent with this definition, Applicants respectfully request that the § 112, second paragraph rejection of claims 50-54 be withdrawn.

III. The Rejection Of Claims 50-54 Under 35 U.S.C. § 102

Claims 50-52 were rejected under 35 U.S.C. § 102(b) as being anticipated by JP 10-224015 and claims 50-54 were rejected under 35 U.S.C. § 102(b) as being anticipated by EP 329807. Applicants submit that both references fail to disclose the pending claims for at least the following reasons.

With regard to the present invention, amended claim 50 recites, in-part, a cleaning device to remove an unnecessary material from a film-coated board material...said cleaning device comprises a cleaning tank; a cleaning solution provided in said cleaning tank; a supersonic oscillator installed in said cleaning solution; a feeding device which feeds said film-coated board material into said cleaning solution while retaining said film-coated board material; and a means for selectively removing said unnecessary material from said film-coated board material without peeling said film material; wherein said means for selectively removing unnecessary material from said film-coated board material without peeling said film material includes at least one selected from the group consisting of (i) a water flow generator which generates a water flow between said supersonic oscillator and said film-coated board material located above said supersonic oscillator; (ii) a diffusing plate installed between said supersonic oscillator and said film-coated board material located above said supersonic oscillator; (iii) a plurality of resonance control plates which hold said film-coated board material therebetween, and wherein the plurality of resonance control plates include at least one plate which internally has at least either an air layer or bubbles.

It is alleged that JP 10-224015 discloses that the substrate feeding means 22 and metallic plates 15 around the substrate inherently have an effect on resonance from energy emitted from

the oscillating device. However, these plates are attached ***after*** the oscillation step (see, step 1(f) of '015) and therefore, have no effect on the resonance from the oscillating device as the plates are not present during the oscillation/cleaning step 1(c). Furthermore, '015 is silent with regard to either a waterflow generator or a diffusing plate. Accordingly, '015 fails to disclose a means for selectively removing unnecessary material from said film-coated board material without peeling said film material includes at least one selected from the group consisting of (i) a water flow generator which generates a water flow between said supersonic oscillator and said film-coated board material located above said supersonic oscillator; (ii) a diffusing plate installed between said supersonic oscillator and said film-coated board material located above said supersonic oscillator; (iii) a plurality of resonance control plates which hold said film-coated board material therebetween.

Furthermore there is no teaching or suggestion in the '015 reference that the board has a film coating. Moreover, even assuming *arguendo* that the metal plates were considered a film-coating, they are applied after the oscillating/cleaning step. Therefore, '015 fails to disclose a feeding device which feeds said ***film-coated*** board material into said cleaning solution.

The Examiner also alleges that paragraph [0039] of the '015 reference, which states that a process may be repeated, reads on the plates being part of the feeding means. However, paragraph [0039] of '015 refers to the formation of a multilayer circuit by repeating all of the steps of formation of the circuit, not a cleaning device to remove an unnecessary material from a film-coated board material. Furthermore, as the '015 reference fails to teach all of the above described limitations of present invention, even if the process did read on the plates being part of the feeding means, the repeating step fails to anticipate the present invention because of the differences noted above. Accordingly, it appears that the § 102 rejection is improper.

With regard to the EP 329807 reference, the Examiner alleges that the rollers 7/8/9 are a substrate feeding means. However, as the rollers pass each board material along, they do not ***retain*** the material. In contrast, claim 50 recites a "feeding device...while retaining said film-coated board material". Thus, '807 fails to disclose a cleaning device to remove an unnecessary material from a film-coated board material comprising feeding device...while retaining said film-coated board material. Furthermore, there is no teaching or suggestion in the '807 reference of any water flow generator, a diffusing plate, or any resonance control plates as recited in claim 50. Accordingly, EP 329807 fails to disclose the present invention.

As anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, both JP 10-224015 and EP 329807 fail to disclose the cleaning device having the above cited limitations, it is clear that both JP 10-224015 and EP 329807 do not anticipate amended claim 50 or any claim dependent thereon.

IV. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 50 is patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

V. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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